Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Amendment of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands	)	WT Docket No. 03-66 RM-10586
	)	
Part 1 of the Commission's Rules - Further Competitive Bidding Procedures	)	WT Docket No. 03-67
	)	
Amendment of Parts 21 and 74 to Enable Multipoint Distribution Service and the Instructional Television Fixed Service Amendment of Parts 21 and 74 to Engage in Fixed Two-Way Transmissions	)	MM Docket No. 97-217
	)	
Amendment of Parts 21 and 74 of the Commission's Rules With Regard to Licensing in the Multipoint Distribution Service and in the Instructional Television Fixed Service for the Gulf of Mexico	)	WT Docket No. 02-68 RM-9718
	)	

REPLY COMMENTS OF
THE MISSISSIPPI EDNET INSTITUTE, INC.

Mississippi Ednet Institute, Inc. (EDNET) hereby submits these reply comments in the above-captioned matter.[1] These comments support the "White Paper" submitted by the Wireless Communications Association (WCA), the National ITFS Association (NIA) and the Catholic Television Network (CTN) as further explained in the "Comments of WCA, NIA and CTN" submitted in this proceeding. EDNET also supports the separately filed "Joint Comments of NIA and CTN" regarding the need to preserve the existing educational reservation of ITFS spectrum.

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[1] The White Paper is summarized at Appendix "C" of *Amendment of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands*, Notice of Proposed Rulemaking and Memorandum Opinion and Order, FCC 03-56 (rel. April 2, 2003) 18 FCC Rcd 6722 (2003).

I. INTRODUCTION

The Mississippi EDNET Institute is charged with coordinating the use of twenty ITFS channels in nine locations licensed to the Board of Trustees of the Institutions of Higher Learning, the State Board for Community and Junior Colleges, the Mississippi Authority for Educational Television, the Mississippi State Board of Education and EDNET.

EDNET's mission is that of promoting, encouraging and assisting all levels of education, research and economic development primarily within the state of Mississippi, including preschool, elementary, secondary, adult and higher education, especially in local communities and rural areas of the state, by implementing public/private partnerships to provide education and training opportunities through wireless technologies.

EDNET and its educational partners have heretofore utilized their ITFS channels to broadcast educational information via analog television and leased excess capacity within a public/private partnership both to enable the development of the statewide system and to generate revenue to sustain operations. EDNET participated in the FCC proceeding in which reallocation of ITFS/MDS spectrum for "Third Generation" mobile services was considered and rejected, and organized the filing of comments by numerous Mississippi educational and governmental institutions which have worked with EDNET on programs and services utilizing the ITFS spectrum.

Bankruptcy and other telecommunications industry challenges have caused EDNET, along with other ITFS licensees, to become more self-sufficient while awaiting new opportunities for public/private partnerships. Unfortunately, the maturation of new "two-way" wireless digital technology and the telecommunications marketplace in general have caused a

delay in the development of new partnerships. EDNET has a keen interest both in partnering with the private sector to foster the growth of new wireless broadband technologies and in directly using them to provide distance learning and other educational opportunities and information.

Mississippi is largely a rural agricultural state with a very diverse population. Small towns are most prevalent, with major urban centers located in Jackson the capitol, to the northeast and along the Gulf Coast. The Mississippi Delta is home to many disenfranchised individuals who need and want educational opportunities and training. Broadband Internet access, while available in larger cities, is for the most part unavailable in Mississippi's rural areas.

EDNET realizes the need to restructure the ITFS spectrum from programmatic, technological and utilization standpoints. With the advent of video compression and other digital technologies, we recognize the opportunity to provide more and better educational opportunities through our channels. Also, we recognize that new business models where telecommunications companies extend their services and reach through the leasing of excess ITFS capacity can still support our educational mission by generating much needed operational revenue, but also by making broadband wireless access available to especially those located in disenfranchised communities, like Mississippi's delta region.

Some might say that the advent of the Internet has made some opportunities previously provided through ITFS channels obsolete. Many universities and colleges are providing "on-line" courses where students log on to websites where curriculum is presented and provide feedback to instructors via e-mail. Still, in most cases, the Internet cannot provide video-based

distance learning. While the Internet might provide almost limitless access to information in the future, it remains constrained by limited bandwidth and, as is the case in Mississippi's rural areas, unavailable.

The majority of the population still obtains Internet connectivity through a "dial-up" modem capable of at best 56 kbps. While this may be marginally adequate for searching and retrieving information, it falls far short of providing even marginally acceptable video and/or audio quality. Video-based learning remains, for the most part, out of reach.

We believe that through the implementation of new wireless digital technology, the restructuring of the ITFS spectrum and new public/private partnerships can greatly increase broadband Internet availability and make broadband video a reality in many cases.

II. THE COMMISSION SHOULD ADOPT THE COMPROMISE POSITION CONTAINED IN THE WHITE PAPER AS IN THE PUBLIC INTEREST

EDNET supports the White Paper submitted on October 7, 2003 by WCA, NIA and CTN (called the "Coalition Proposal" by the FCC) as further explained by the WCA/NIA/CTN Comments in this proceeding. The "White Paper" represents a compromise among a large number of licensees in the band and their representatives as well as providers of services and other entities who hope to construct advanced fixed and mobile systems in the near-term. EDNET and its constituent organizations could well desire other changes to the MDS and ITFS rules than those contained in the "White Paper". Most of the participants in the White Paper process also would want other changes. This is the very nature of compromise. As participant IPWireless, Inc., stated, "Arguably, the Coalition band plan is not the most elegant technical solution to the refarming of the ITFS/MDS band. However, it does represent a compromise acceptable to a majority of the licensees providing input to the Coalition" (IPW Comments, P. 5).

EDNET agrees that adoption of the compromise solution represented by the White Paper proposal would more likely than any alternative presented by the FCC in the NPRM lead to the rapid development of advanced fixed and wireless systems in the band.

III. ITFS SPECTRUM SHOULD CONTINUE TO BE RESERVED FOR LICENSING TO EDUCATIONAL ENTITIES

EDNET agrees with the statement made by NIA and CTN in their "Joint Comments: "there are clear and compelling reasons not to permit market forces alone to dictate the control and use of ITFS spectrum" (NIA/CTN Comments, p. 3). ITFS utilization has varied in the forty years that the spectrum has been available for licensing. The FCC's changing policies on excess capacity leasing, and in particular the changes made to encourage competition to the wired cable television industry, have led to dislocations of ITFS licensees and interrupted service. EDNET knows this as much as any licensee, having leased spectrum to two entities which have gone into bankruptcy and having gone into arbitration (unresolved) to secure elements of its state-wide system which were never completed.

Still, EDNET urges the FCC to stay the course as to reservation of the remaining ITFS spectrum exclusively for qualified licensees. EDNET represents a $4.7 million dollar investment of which 90% was provided through a public/private partnership. During the recent 2003 legislative session, an additional $1.1 million dollars was appropriated for use by EDNET to convert its network to a digital transmission system to begin broadcasting IP based video. Commercial entities should not be permitted to secure new ITFS licenses nor should the FCC permit the sale of ITFS licenses to commercial entities. For decades, ITFS licensees where able deliver, and have delivered, varied and significant educational services, and with appropriate technical rule changes these services should expand. Notwithstanding the difficulties faced by its

excess capacity lessee, EDNET has developed the following vision for utilization of its ITFS spectrum and has made significant steps toward implementation:

A. Digital ITFS IP Video and Data Broadcasting for K-12 Schools

Most schools in Mississippi are connected to a data network that affords them either fractional or T1 connectivity. Even so, these network connections must serve at least one computer in each classroom at a given school. Students doing "on-line" research and teachers and administrators conducting daily business leaves little or no bandwidth available for video. In Mississippi, EDNET has explored the use of video on demand via the Internet to provide teachers with support information in the classroom, but the aforementioned bandwidth limitations make it a challenge. This is particularly true when one considers that each time another video is requested, bandwidth requirements double exponentially.

EDNET's solution is broadband, one-way, wireless digital ITFS video that bypasses a school's data connection. Video compression will allow EDNET to provide many channels of high quality multicast video to a school's local area computer network (LAN). Almost all LANs now have at least 100 mbps capacity. In EDNET's plan, a school would receive a digital wireless multicast via its existing ITFS receive antenna and, through a small digital receiver, make the IP stream available for connection to the institution's digital network switch. In most cases, the multichannel video would occupy less than 10 mbps of LAN capacity. Students, teachers and administrators could then access video programming at the desktop. Students could take part in electronic field trips and teachers could access programming to supplement classroom instruction. The wired Internet could then be used for research and information retrieval and requesting video while the ITFS digital video system provides broadband service

for delivery. EDNET plans to work with Mississippi Broadcasting Networks to begin testing the delivery of video-on-demand to targeted schools in the Jackson, Mississippi area.

B. "IP Casting" to Universities and Community College

The Mississippi Board of Trustees of the Institutions of Higher Learning and the State Board for Community and Junior Colleges are ITFS licensees and are in partnership with EDNET to ensure that the reach of universities and community colleges is extended through wireless distance learning.

A marriage of digital ITFS broadcasts with existing data networks and conventional cable television systems will allow college courses, seminars and other educational information to be broadcast statewide, even to those who may not have computers. Universities and community colleges will also be able to make recruiting presentations to students at nearly one-thousand K-12 schools to aid students in making career choices, in selecting a specific institution and in locating and acquiring financial aid.

Mississippi is primarily a rural state with an extensive agricultural industry. The Cooperative Extension Service at Mississippi State University already has many field offices that can receive broadcasts beneficial to farmers and homeowners. Industries using advanced technology continue to flourish in Mississippi precipitating the need for a highly trained and educated workforce. Through new digital wireless ITFS technology, EDNET will be able to bring courses in engineering and technology from universities and community colleges directly to the workplace, increasing worker efficiency and increasing productivity resulting in an overall growth of the state's economy.

Continued public/private partnerships can foster the deployment of new "Broadband Wireless Networks" and bring high speed Internet services even to those in disenfranchised

areas. "High-Tech" industries are attracted to states with a highly educated workforce and advanced services like "High Speed Broadband Internet Access".

C. Digital ITFS IP Video Broadcasting for State Government

Mississippi's state agencies, as in other states, must conduct regular staff training. A large part of the total training budget includes indirect costs for travel and per diem. Staff time away from the workplace reduces efficiency in state government and precipitates additional expense.

EDNET has recently begun to work with agencies like the Mississippi State Personnel Board to develop ways in which training can be provided from agency headquarters to field offices through digital ITFS technology. Agencies have expressed a willingness to install the low cost video origination equipment necessary to allow "real-time" training to be sent to the EDNET Network Control Center for statewide distribution via ITFS.

In each case where broadband digital ITFS video is available at the desktop, participants may be "on-line" using the institutions' wired Internet connection. While the instructor is seen with high-quality video on part of the screen, staff may interact with the instructor on another portion of the screen.

D. EDNET Provision of Services for Homeland Security

EDNET and the Mississippi State Department of Health (MSDH) are poised to begin a project that will connect some two-hundred hospitals and health departments in Mississippi to MSDH, University of Mississippi Medical Center (UMMC) and Mississippi Emergency Management Headquarters. After many technologies were explored to provide statewide video distribution, EDNET and digital ITFS was the clear choice when security, reliability and cost

were considered. EDNET has identified and evaluated the equipment and systems needed to implement this service and plans soon to file the necessary applications at the FCC.

EDNET's new digital technology provides addressability to an individual user and has the added security of not being directly associated with conventional Internet traffic. Each digital receiver deployed has a unique address and additionally the IP protocol to be used will allow each channel to have its own IP address.

As the video component of the "Health Alert Network" (Attachment A), training and information to counteract "Bioterrorism" will be distributed statewide in real time. MSDH and UMMC will be able to provide regularly scheduled training for staff and health professionals while Mississippi Emergency Management will be able to coordinate emergency field operations. This network is funded through a federal grant to MSDH through the Centers for Disease Control.

EDNET's ability to deliver statewide broadcasts to inform the public on matters of local or national emergency on a secure and proprietary basis, even when other networks might be disabled, represents a true resource during threats to homeland security. EDNET will use no commercial telecommunication services to provide network interconnectivity between transmission sites.

EDNET has entered into discussions with Mississippi Information Technology Services to determine ways in which our future two-way wireless data capability can complement existing wired networks that serve education, law enforcement and state government. The potential exists for law enforcement and emergency services to take advantage of high speed wireless data delivery to help speed the delivery of services in the event of an emergency.

IV. CONCLUSION

Mississippi is fortunate and unique in that it has planned for the utilization of ITFS in a consolidated effort on a statewide basis. The network can, through interconnection with wired cable television and other technologies, take training and education far beyond the doors of our public schools, colleges and universities. However, if the FCC fails to adopt rules which can support the services initiated and planned, these efforts will fail. EDNET believes the adoption of the "White Paper" will be the quickest path toward implementation of advanced services in the band, and urges the FCC to adopt rules to that end.

Respectfully submitted,

MISSISSIPPI EDNET INSTITUTE, INC.

By: _____/s/__ _____
Martin Mangold, President

Counsel:

Steven C. Schaffer, Esq.
SCHWARTZ, WOODS & MILLER
Suite 300, Dupont Circle Building
1350 Connecticut Avenue, N.W.
Washington, D.C. 20036
(202) 833-1700

Its Attorneys

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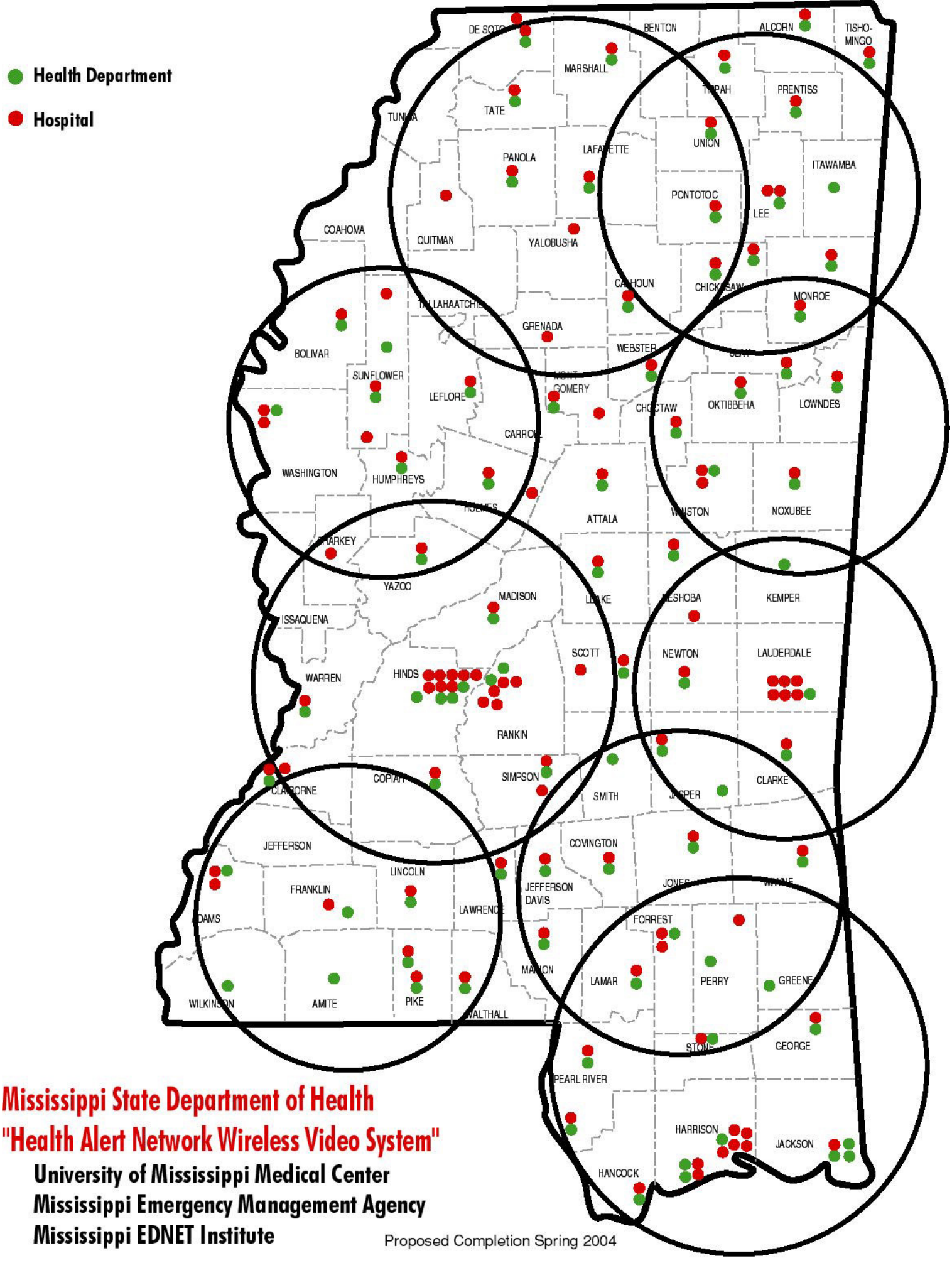

Mississippi State Department of Health
"Health Alert Network Wireless Video System"

University of Mississippi Medical Center
Mississippi Emergency Management Agency
Mississippi EDNET Institute

Proposed Completion Spring 2004